Delgado Community College Purchasing Department 2703 General DeGaulle Drive New Orleans, Louisiana 70114 (504) 762-3027

**Invitation to Bid** 

# Bid Name: R001035 Construction of Asphalt Parking Lot

To Be Opened On: December 15th, 2009 at 3:00PM

> Contact Person: Tracey Sheffield Assistant Director (504) 762-3029

NAME OF COMPAN	Υ	
ADDRESS		
CITY, STATE, ZIP		
PHONE NUMBER	FAX NUMBER	EMAIL
SIGNATURE OF COM	MPANY REPRESENTA	ATIVE
NAME (PRINTED) &	TITLE OF COMPANY	/ REPRESENTATI

\*\* This form must be completed and submitted with your bid

## I. GENERAL INFORMATION

1. Any questions regarding this Invitation to Bid shall be in writing and shall be addressed to Tracey Sheffield at the following address:

Delgado Community College Temporary Executive Offices 2703 General DeGaulle Dr New Orleans, La 70114-6222

Email: <u>tsheff@dcc.edu</u> Fax: (504) 361-6658

Any additional information resulting from such inquiries shall be distributed to all bidders via addenda. The College will not be responsible for any other explanation of the documents.

- 2. Bids may be submitted by mail or in person. Mailed bids and hand carried bids shall go to the address in item #1. Do <u>not</u> leave hand carried bids at the front desk. If bids are delivered via an express mail carrier, the bid name shall be on the outside of the packaging.
- 3. Each bidder is solely responsible for the accuracy and completeness of its bid. Errors or omissions may be grounds for rejection, or may be interpreted in favor of the College.
- 4. Each bidder is solely responsible for the timely delivery of its bid. Delgado Community College will not be responsible for any delays in the delivery of bids, whether delayed in the mail, or for any reason whatsoever.
- 5. Only the issue of a purchase order or a signed acceptance of a proposal constitutes acceptance on the part of the College.
- 6. Assuming there is no prompt payment discount provision, payment will be made within 30 days from receipt of products in satisfactory condition, or within 30 days from receipt of invoice, whichever is later.

# II. <u>BID FORM</u> R001035 – Construction of Asphalt Parking Lot

#### SCOPE OF WORK:

Contractor shall provide all labor, equipment, and materials to perform all work required to construct an asphalt parking lot approximately 164' x 247' in the field adjacent to Bldg 4 at the Delgado City Park Campus.

All work to be performed to normal practices of the trades and manufacturer's specifications of all materials used. The project includes but is not limited to the following scope of work.

- Design new parking lot and provide drawings to include location of parking stalls, new walkway, future expansion, and two light poles to be installed by Delgado.
- Install a minimum of 6 cement culverts and tie into existing drainage system.
- Slope facility to insure proper drainage.
- Saw cut and remove 15' of concrete foundation, remove concrete pad and bollards, and remove light pole.
- Protect trees from damage.
- Prune canopy of live oak tree to a height that will allow vehicles to park underneath.
- Clear, grub, proof-roll, and backfill area.
- Spread eight inches of #610 limestone over woven geotextile.
- · Spread and compact hot-mix asphalt to four inch thickness.
- Paint parking stalls and provide concrete wheel stops.
- · Re-paint adjacent parking lot directional arrows according to new layout.

AMOUNT BID:
AMOUNT BID THE REFERENCED WORK:
By signing below, the Vendor/Contractor agrees that he/she complies with all bid requirements and special conditions as stated in the bid and has reviews and received any and all addenda if applicable.
Signature

# III. REQUIREMENTS & INSTRUCTIONS

- A <u>mandatory</u> pre-bid site visit has been scheduled for any bidder intending to submit a bid for this project. The pre-bid site visit will be held at the City Park Campus located at 615 City Park Avenue, New Orleans, LA 70119 on <u>December 2nd, 2009 at 10:30am</u>. All Bidders are to meet on the <u>Orleans Avenue</u> side of the Campus, in the breezeway behind the trailers. Although impromptu questions will be permitted and spontaneous answers will be provided during the conference, the only official answer or position of DCC will be stated in writing in response to written questions. A <u>signed jobsite visit form</u> (see section V) must be included as a part of the bid response. Failure to do so will result in the immediate disqualification of the bid without further discussion.
- Any questions arising from either the specifications or as a result of the site visit must be addressed in writing and will be answered via an Addendum. All questions must be submitted no later than <u>December 7th, 2009, 12:00PM CST</u>. A final 48-hour period after the issuance of the Addendum will be granted for questions which are directly related <u>only</u> to the answers provided in the Addendum.
- Bidder must be licensed in Louisiana to perform this type of work. A copy of the bidder's license must be submitted with the bid.
- Bidders are to comply with the insurance requirements as stated in the special conditions of the bid. The
  provided <u>indemnification form</u> (see section VI) must be completed and submitted with your bid. Failure
  to comply with these requirements will result in disqualification of your bid.
- All work must be completed within <u>forty-five (45)</u> days from the commencement of work. Work must begin within <u>ten (10)</u> days of the notice to proceed or receipt of the purchase order.
- The successful bidder will be responsible for ensuring that Delgado receives the required <u>insurance</u>
   <u>certificate</u> after the notice of award (as per terms and conditions) in a timely manner in order to meet the
   required work expectancy timeframe. No work may commence until a proper certificate is received.
- Items not listed but necessary for completion of the job shall be furnished as part of the bid. Additional
  costs disclosed later will be at the expense of the vendor.
- All shipping, handling, materials, labor or any other charges necessary to compete this job must be included in amount bid.

\* End of Section

# IV. SPECIAL CONDITIONS

 Delgado Community College of the State of Louisiana is an equal opportunity employer and looks to its contractors, subcontractors, vendors, and suppliers to take affirmative action to effect this commitment in its operations.

All bids must be submitted on the form(s) furnished for this purpose and must be filled out in ink or typewritten and signed in ink. Do not erase, correct, or write over any prices or figurers necessary for the completion of this bid proposal. If any corrections are necessary, each must be initialed by bidder. Failure to comply with these requirements may cause your bid to be disqualified.

A response to a bid invitation is our only indication of your interest in college business. Failure to respond to six (6) consecutive bid invitations may cause your name to be removed from the bidders' list.

Effective September 1, 1991, in accordance with Act 1029 of the 1991 Regular Legislative Session, Delgado Community College will not be responsible for any sales tax, either state or local.

Effective August 15, 1997, in accordance with L.R.S. 39:1594 (Act 121), the person signing the bid must be:

- a) A current corporate officer, partnership member or other individual specifically authorized to submit a bid as reflected in the appropriate records on file with the Secretary of State; or
- b) An individual authorized to bind the vendor as reflected by an accompanying corporate resolution, certificate, or affidavit.

By signing the bid, the bidder certifies compliance with the above.

All deliveries shall be made FOB Destination to the College unless otherwise specified by the College. All freight charges are to be clearly stated on the bid form. The College will not be responsible for freight charges not clearly stated as a part of this bid.

Delgado Community College reserves the right to reject any and all bids and to waive any informalities.

It shall be distinctly agreed and understood that the price quoted <u>must</u> be a firm price, and not be subject to change at time of the shipment of goods or delivery of services.

- 2. All items delivered shall be subject to inspection as to grade and/or quality. If any item is inspected and fails to meet the specifications, the delivery already made will be held for the Vendor's disposition or returned to the Vendor via Freight Collect. If the Vendor fails to make satisfactory replacement within a reasonable time as determined by the College, the College reserves the right to cancel the item and to purchase it elsewhere.
- 3. If item(s) or services bid do not <u>fully</u> comply with specifications, including brand and/or product number, bidder must state in what respect the item(s)/services deviate. Failure to note exceptions on the bid form will not relieve the successful bidder from supplying the actual products or services requested.
- Award to be made on an all-or-none basis.
- 5. Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Bids will be considered for any brand that meets or exceeds the quality of the specifications listed for any item. Vendor must state the brand/model he or she is bidding on each item.

It shall be the sole responsibility of the Vendor to prove equivalency. Vendor shall submit with the bid all illustrations, descriptive literature, and specifications necessary to determine equivalency. Failure to do so may eliminate your bid from consideration. The decision of the College as to equivalency shall be final.

- 6. If a vendor wishes to submit an alternate bid in addition to the brand/model requested, he or she may submit one (1) alternate bid. The alternate bid must be a separate submission, must be clearly marked as an alternate, and must include all applicable forms (i.e., jobsite visit). In addition, a separate, signed cover sheet must be submitted with the alternate.
- 7. The above quantities are estimated to be the amounts needed. In the event a greater or lesser quantity is needed, the right is reserved by the College to increase or decrease the amount at the unit price stated in the bid.
- NOTE: No overruns will be accepted by the College.
- 9. If the Vendor fails to make delivery within a satisfactory time as determined by the College, the College reserves the right to cancel the item and to purchase it elsewhere, charging the increase in price and cost of handling, if any, to the Vendor making the original unsatisfactory or late delivery.
- 10. Discounts for less than 1% and for less than thirty (30) days will not be considered in making awards.
- 11. NOTE: If, upon visiting site, Vendor finds conditions that disagree with the physical layout as described in this bid, or other features of the specifications that appear to be in error, same shall be noted in your bid. Otherwise it will be interpreted that you are quoting as specified.
- 12. It shall be specifically agreed and understood that the Bidders may attend the Bid opening. They shall, whenever any award is considered, furnish specific samples for examination upon request by the College. It shall also be specifically agreed and understood that the decision of the College shall be final.
- 13. No information will be given out as to opinions concerning the ultimate outcome while consideration of the award is in progress.
- 14. The college reserves the right to cancel this contract upon thirty (30) days written notice for failure of the Vendor to deliver on time, for delivery of unsatisfactory merchandise, or for any unsatisfactory performance by the Vendor as determined by the College.
- 15. Successful bidder will be responsible for the unloading and placing of equipment and/or supplies in the location designated by the College.
- 16. Vendor compliance with the attached insurance requirements is mandatory, and evidence of such compliance must be submitted with the bid (*insurance indemnification agreement*). Failure to do so will result in immediate disqualification of the bid. A certificate of insurance must be submitted to Delgado Community College, delineating Delgado as the certificate holder prior to the commencement of any work.
- 17. In case of default by the Vendor, the College reserves the right to purchase any or all items in default on the open market, charging Vendor with any excessive costs. Should such charge(s) be assessed, no subsequent bids of the defaulting Vendor will be considered until the assessed charge(s) have been satisfied.
- 18. List of distributors: The Vendor signing the bid shall be designated as the Prime Vendor on any contract/agreement resulting from this bid. If additional Vendors are authorized to receive orders for

items covered under this proposal, the Vendor must submit, with bid, a list of those additional authorized distributors.

- 19. The College also reserves the right to reject any Vendor who can not start work within (15) fifteen days from the date of award.
- 20. Successful Vendor shall inspect jobsite and make his/her own measurements prior to installation.
- 21. Scope of Work: work shall include all labor, materials, and services required to produce a completed repair/installation which is acceptable to the College.
- 22. Final Clean-Up: Before this project is acceptable and complete, Vendor shall clean up and remove from the premises all debris resulting from his work, and shall see to it that all materials furnished is/are left in good order, clean, and properly installed.

\*\* End of Special Conditions

# V. JOBSITE VISIT CERTIFICATION

# **R001035 Construction of Asphalt Parking Lot**

This signed statement certifies that the Vendor named below has visited the job site and is familiar with all conditions surrounding fulfillment of the specifications for the project.

Bidder's Name	College Representative's Name
Bidder's Signature	College Representative's Signature

Note: This certification <u>must</u> be signed by a full time employee of the Vendor and the College representative and be submitted with the bid proposal.

A signed letter from the College representative (stating that the Vendor has visited the job site) may be substituted for the above and <u>must</u> be submitted with the proposal.

Failure to submit one of the above with the bid proposal shall cause your bid to be disqualified. Site visit to be held at the jobsite: Delgado Community College, City Park Campus 615 City Park Avenue, New Orleans, LA 70119 on December 2nd 2009 at 10:30am. Bidders are to meet in the breezeway behind the trailers on the on the Orleans Ave side of the Campus.

Delgado Contact:

Mr. Chris Rowley

Phone: (504) 274-6077

## VI. INSURANCE REQUIREMENTS FOR VENDORS

Vendor shall procure and maintain for the duration of the proposed work insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the vendor, his agents, representatives, employees, or subcontractors. The cost of such insurance shall be included in the vendor's bid.

#### A. Minimum Scope of Insurance

Coverage shall be at least as broad as:

- 1. Insurance Services Office Form number GL0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office Form number GL0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage ("Occurrence" Form CG0001). "Claims Made" form is unacceptable. The "Occurrence Form" shall not have a "Sunset Clause".
- 2. Insurance Services Office Form number CA0001 (Ed. 1/78) covering Automobile Liability and Endorsement CA0025 or CA0001 1293. The policy shall provide coverage for owned, hired, and non-owned coverage. If an automobile is to be utilized in the execution of the work and the Vendor/Contractor does not own a vehicle, then proof of hired and non-owned coverage is sufficient.
- 3. Worker's Compensation Insurance as required by the Labor Code of the State of Louisiana, including Employers Liability Insurance.

# B. Minimum Limits of Insurance

Vendor shall maintain limits no less than:

- 1. Commercial General Liability: \$1,000,000.00 combined single limit per occurrence for bodily injury, personal injury and property damage.
- 2. Automobile Liability: \$1,000,000.00 combined single limit per accident, for bodily injury and property damage.
- 3. Workers Compensation and Employers Liability: Workers' Compensation limits as required by the Labor Code of the State of Louisiana and Employers Liability coverage.

#### C. Deductable and Self-Insured Retention

Any deductibles or Self-Insured Retention must be declared to and approved by the College. At the option of the College, either: the Insurer shall reduce or eliminate such deductibles or self-insured retention as respects the College, it's Officers, Officials, Employees, and Volunteers; or Vendor or Contractor shall procure a Bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

#### D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain the following provisions:

#### 1. General Liability and Automobile Liability Coverage

A. The College, its Officers, Officials, Employees, Boards and Commissions and Volunteers are the be added as "Additional Insured's" as respects liability arising out of activities performed by or on behalf of the Vendor; products and completed operation of the Vendor, premises owned, occupied or used by the Vendor. The coverage shall contain no special limitations on the scope of protection afforded to the College, its Officers, Officials, Employees or Volunteers.

- B. Any failure to comply with reporting provisions of the policy shall not affect coverage provided to the College
- C. The Vendor's insurance shall apply separately to each insured against whom claim is made or suite is brought, except with respect to the limits of the insurer's liability.

# 2. Workers' Compensation and Employers Liability Coverage

The Insurer shall agree to waive all rights of subrogation against the College, its Officers, Officials, Employees, and Volunteers for losses arising from work performed by the Vendor or Contractor for the College

#### 3. All Coverage

Each Insurance Policy required by the clause shall be endorsed to state that the coverage shall not be suspended, voided, canceled by either party or reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested has been given to the College.

# E. Acceptability of Insurers

Insurance is to be placed with Insurers with a Best's Rating of A-:VI or higher. This rating may be waived for Worker's Compensation coverage only.

#### F. Verification of Coverage

Vendor/Contractor shall furnish the College with certificiate(s) of insurance affecting coverage required by this clause before commencement of work. The certificates for each policy are to be signed by a person authorized by the insurer to bind coverage on its behalf. The certificate(s) are to be received and approved by the College before work commences. The College reserves the right to require complete. The College reserves the right to require complete certified copies of all required insurance policies at any time.

#### G. Subcontractors

Vendor/Contractor shall include all subcontractors as insured's under its policies or shall furnish separate certificates for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein.

# VII. INDEMNIFICATION AGREEMENT

agrees to protect, defend,
(CONTRACTOR, VENDOR, LESSEE)
indemnify, save and hold harmless the State of Louisiana, all State departments, Agencies, Boards and Commissions, its Officers, Agents, Servants and Employees, including Volunteers from and against any and all claims, demands, expense and liability arising out of injury or death to any person or the damage or the damage, loss or destruction of any property which may occur or in any way grow out of any act or omission of, its Agents,
(CONTRACTOR, VENDOR, LESSEE)
Servants, and Employees, or any and all costs, expense and/or Attorney fees incurred by
(CONTRACTOR, VENDOR, LESSEE)
As a result of any claim, demands and/or causes of action except those claims, demands and/causes of action arising out of the negligence of the State of Louisiana, all State department, Agencies, Boards and Commissions, its Agents, Representatives and/or employees.  agrees to investigate, handle  (CONTRACTOR, VENDOR, LESSEE)
Respond, to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if (claims, etc.) groundless, false or fraudulent.
Accepted By:
Company Name
Signature
Title
Date Accepted
Is certificate of insurance attached?YESNO

\*\*This form must be completed and submitted with your bid

# VIII. SPECIFICATIONS

**SECTION 312000** 

**EARTH MOVING** 

**SECTION 311000** 

SITE CLEARING

**SECTION 321216** 

ASPHALT PAVING

**SECTION 321723** 

PAVEMENT MARKINGS

#### SECTION 312000 - EARTH MOVING

#### PART 1 - GENERAL

# 1.1 SECTION REQUIREMENTS

- A. Unauthorized excavation consists of excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Project Manager. Unauthorized excavation, as well as remedial work directed by Project Manager, shall be without additional compensation.
- B. Do not interrupt existing utilities serving facilities occupied by Owner or others unless permitted by Project Manager and then only after arranging to provide temporary utility services according to requirements indicated.

#### PART 2 - PRODUCTS

# 2.1 MATERIALS

- A. Satisfactory Soil: ASTM D 2487 Soil Classification Groups GW, GP, GM, SW, SP, and SM; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, or other deleterious matter.
- B. Unsatisfactory Soil: ASTM D 2487 Soil Classification Groups GC, SC, ML, MH, CL, CH, OL, OH, and PT.
- C. Backfill and Fill: Satisfactory soil materials.
- D. Subbase Material: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; with at least 90 percent passing a 1-1/2-inch sieve and not more than 12 percent passing a No. 200 sieve.
- E. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940; except with 100 percent passing a 1-inch sieve and not more than 8 percent passing a No. 200 sieve.
- F. Drainage Course: Narrowly graded mixture of crushed stone, or crushed or uncrushed gravel; ASTM D 448; coarse-aggregate grading Size 57; with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.
- G. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

#### PART 3 - EXECUTION

# 3.1 EARTHWORK

- A. Protect and maintain erosion and sedimentation controls during earth moving operations.
- B. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.
- C. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- D. Explosives: Do not use explosives
- E. Excavate to subgrade elevations regardless of character of materials and obstructions encountered.
- F. Excavate to subgrade elevations. Material to be excavated will be classified as earth.
- G. Excavate for pavements, and walkways. Trim subgrades to required lines and grades.
- H. Plow strip or break up sloped surfaces steeper than 1 vertical to 4 horizontal to receive fill.
- Proof-roll subgrade with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
- J. When subgrade or existing ground surface to receive fill has a density less than that required for fill, break up ground surface, pulverize, moisture-condition or aerate soil, and recompact.
- K. Place backfill and fill in layers not more than 8 inches in loose depth at optimum moisture content. Compact each layer under pavements and walkways to 95 percent of maximum dry unit weight according to ASTM D 698.
- L. Grade areas to a smooth surface to cross sections, lines, and elevations indicated. Grade lawns, walkways, and unpaved subgrades to tolerances of plus or minus 1 inch.
- M. Under pavements and walkways, place subbase course material on prepared subgrades and compact at optimum moisture content to required grades, lines, cross sections, and thicknesses.
- N. Under slabs-on-grade, place drainage course on prepared subgrade and compact to required cross section and thickness.
- O. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 312000

#### SECTION 311000 - SITE CLEARING

#### PART 4 - GENERAL

# 4.1 SECTION REQUIREMENTS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
- B. Salvable Improvements: None
- C. Utility Locator Service: Notify Louisiana One Call for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentationcontrol and plant-protection measures are in place.
- E. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.
- F. Survey: Furnish surveys necessary for the execution of the work and include placement of two light standards to be installed by Delgado.

# PART 5 - PRODUCTS (Not Used)

#### PART 6 - EXECUTION

#### 6.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance.
- B. Protect site improvements to remain from damage. Restore damaged improvements to condition existing before start of site clearing.
- C. Locate and clearly flag trees and vegetation to remain or to be relocated.
- D. Protect remaining trees and shrubs from damage and maintain vegetation. Employ a licensed arborist to repair tree and shrub damage. Restore damaged vegetation. Replace damaged trees that cannot be restored to full growth, as determined by arborist.
- E. Do not store materials or equipment or permit excavation within drip line of remaining trees.
- F. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

#### 6.2 SITE CLEARING

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- B. Use only hand methods for grubbing inside drip line of trees.
- C. Strip topsoil. Stockpile topsoil that will be reused in the Work.
  - 1. Stockpile surplus topsoil to allow for respreading deeper topsoil.
- D. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- E. Remove slab and aggregate base as indicated.
  - 1. Neatly saw-cut length of existing pavement to remain before removing existing pavement.
- F. In areas not to be further excavated, fill depressions resulting from site clearing. Place and compact satisfactory soil materials in 6-inch thick layers to density of surrounding original ground.
- G. Dispose of waste materials, including trash, debris, and excess topsoil, off Owner's property. Burning waste materials on-site is not permitted.

**END OF SECTION 311000** 

#### SECTION 321216 - ASPHALT PAVING

#### PART 7 - GENERAL

# 7.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and hot-mix asphalt design mixes.
- B. Regulatory Requirements: Comply with requirements of Sections 501, 503, 504, 505, 1002, and 1003 of the Louisiana Standard Specifications for Roads and Bridges, 2000 edition.
- C. Asphalt-Paving Publication: Comply with AI MS-22, "Construction of Hot Mix Asphalt Pavements".

#### PART 8 - PRODUCTS

# 8.1 MATERIALS

- A. Type 3 Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes
  - 1. Base Course: Local standard asphalt mix
  - 2. Surface Course: Local standard asphalt mix
  - Provide mixes with a history of satisfactory performance in geographical area where Project is located and complying with ASTM D 3515 for the following nominal, maximum aggregate sizes:
    - a. Base Course: 2-1/2 inch
    - b. Surface Course: 1-1/2 inch
- B. 610 Limestone
  - 1. 8 inch depth
- C. Woven Geotextile
- D. Pavement-Marking Paint: MPI #32 alkyd traffic marking paint.
  - 1. Color: As indicated
- E. Wheel Stops: Type C, precast, air-entrained concrete, 3,000-psi minimum compressive strength, 5-1/2 inches high by 7-3/4 inches wide by 72 inches long. Provide chamfered corners and drainage slots on underside and holes for anchoring to substrate.

#### PART 9 - EXECUTION

# 9.1 SITE PREPARATION

# A. Drainage

- 1. Install a minimum of 6 cement culverts.
- 2. Tie culverts into existing drainage system near Building 4.
- 3. Slope facility to insure proper drainage.
- 4. Use tunneling instead of trenching through tree roots if necessary.

# B. Geotextile

- 1. Use a woven type geotextile suitable for this region.
- 2. Roll out geotextile by hand and place in intimate contact with the graded area and ensure that the geotextile is free of folds and wrinkles.
- 3. Overlap all geotextile transverse and longitudinal joints a minimum of 18 inches and so that the upstream strip of geotextile overlap the downstream strips.
- 4. Extend all geotextile so that it is at least 6 inches beyond the parking lot border.
- 5. To cushion the geotextile and reduce the potential for fabric puncture, use 2 inches of sand to cover roots underneath the tree drip lines.

#### C. Limestone

- 1. Dump 610 Limestone onto previously placed limestone.
- 2. To avoid puncturing, do not drive directly on the geotextile.
- 3. Maintain at least 6 to 12 inches cover between the truck tires and the geotextile.
- 4. Spread the limestone over the geotextile using small, tracked bulldozers to a depth of 8 inches. Keep blade high to avoid driving rock down into the frabric.
- 5. After spreading, compact using standard compaction equipment.

#### 9.2 PAVING

- A. Place hot-mix asphalt to required grade, cross section, and thickness. Promptly correct surface irregularities in paving course.
  - 1. Spread mix at minimum temperature of 250 deg F.
- Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers. Complete compaction before mix temperature cools to 185 deg F.
- C. Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness.
- D. Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to 92 percent of reference maximum theoretical density according to ASTM D 2041.

- E. Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- F. While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- G. Remove and restore paved areas that are defective or contaminated.
- H. Allow paving to age for 14 days before starting pavement marking.
- Apply pavement-marking paint with mechanical equipment to a minimum wet film thickness of 15 mils.
- J. Install wheel stops in bed of adhesive as recommended by manufacturer.
- K. Securely attach wheel stops into pavement with two galvanized-steel dowels.

END OF SECTION 321216

# SECTION 32 17 23 PAVEMENT MARKINGS

#### PART 1 - GENERAL

#### 1.1 DESCRIPTION

This work shall consist of furnishing and applying paint on pavement surfaces, in the form of traffic lanes, parking bays, areas restricted to handicapped persons, crosswalks, and other detail pavement markings, in accordance with the details as shown or as prescribed by the Project Manager. Conform to the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the U.S. Department of Transportation, Federal Highway Administration, for details not shown.

#### 1.2 SUBMITTALS

- A. Furnish Manufacturer's Certificates and Data certifying that the following materials conform to the requirements specified.
- B. Paint.

#### 1.3 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. Federal Specifications (Fed. Spec.):

TT-P-1952D ...... Paint, Traffic Black, and Airfield Marking, Waterborne

C. Master Painters Institute (MPI):

No. 97-2007..... Latex Traffic Marking Paint

#### PART 2 - PRODUCTS

#### 2.1 PAINT

Paint for marking pavement (parking lot and zone marking) shall conform to MPI No. 97, color as shown. Paint shall be in containers of at least 5 gallons. A certificate shall accompany each batch of paint stating compliance with the applicable publication.

#### 2.2 PAINT APPLICATOR

Apply all marking by approved mechanical equipment. The equipment shall provide constant agitation of paint and travel at controlled speeds. The equipment shall have manual control to apply continuous lines of varying length and marking widths as shown. Provide pneumatic spray guns for hand application of paint in areas where a mobile paint applicator cannot be used. An

experienced technician that is thoroughly familiar with equipment, materials, and marking layouts shall control all painting equipment and operations.

# 2.3 SANDBLASTING EQUIPMENT

Sandblasting equipment shall include an air compressor, hoses, and nozzles of proper size and capacity as required for cleaning surfaces to be painted. The compressor shall furnish not less than 0.08 m<sup>3</sup>/s (150 cfm) of air at a pressure of not less than 625 kPa (90 psi) at each nozzle used.

#### PART 3 - EXECUTION

#### 3.1 SURFACE PREPARATION

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Thoroughly clean all surfaces to be marked before application of paint. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods. Completely remove rubber deposits, existing paint markings, and other coatings adhering to the pavement with scrapers, wire brushings, sandblasting, mechanical abrasion, or approved chemicals as directed by the Project Manager. Where oil or grease are present on old pavements to be marked, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application. After cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint. Pavement marking shall follow as closely as practicable after the surface has been cleaned and dried, but do not begin any marking until the Project Manager has inspected the surface and gives permission to proceed. The Contractor shall establish control points for marking and provide templates to control paint application by type and color at necessary intervals. The Contractor is responsible to preserve and apply marking in conformance with the established control points.

#### 3.2 APPLICATION

Apply uniformly painted pavement marking of required colors, length, and width with true, sharp edges and ends on properly cured, prepared, and dried surfaces in conformance with the details as shown and established control points. Temperature of the surface to be painted and the atmosphere shall be above 50°F and less than 95°F. Apply the paint at a wet film thickness of 0.015 inch. Apply paint in one coat. At the direction of the Project Manager, markings showing light spots may receive additional coats. The maximum drying time requirements of the paint specifications will be strictly enforced, to prevent undue softening of asphalt, and pick-up, displacement, or discoloration by tires of traffic. If there is a deficiency in drying of the marking,

discontinue paint operations until cause of the slow drying is determined and corrected. Remove and replace marking that is applied at less than minimum material rates; deviates from true alignment; exceeds stipulated length and width tolerances; or shows light spots, smears, or other deficiencies or irregularities. Use carefully controlled sand blasting, approved grinding equipment, or other approved method to remove marking so that the surface to which the marking was applied will not be damaged.

#### 3.3 PROTECTION

Conduct operations in such a manner that necessary traffic can move without hindrance. Protect the newly painted markings so that, insofar as possible, the tires of passing vehicles will not pick up paint. Place warning signs at the beginning of the wet line, and at points well in advance of the marking equipment for alerting approaching traffic from both directions. Place small flags or other similarly effective small objects near freshly applied markings at frequent intervals to reduce crossing by traffic. Efface and replace damaged portions of markings at no additional cost to the Government.

# 3.4 DETAIL PAVEMENT MARKING

Use Detail Pavement Markings, exclusive of actual traffic lane marking, at exit and entrance islands and turnouts, on curbs, at crosswalks, at parking bays, and at such other locations as shown. Show the International Handicapped Symbol at indicated parking spaces. Color shall be as shown. Apply paint for the symbol using a suitable template that will provide a pavement marking with true, sharp edges and ends. Place detail pavement markings of the color(s), width(s) and length(s), and design pattern at the locations shown.

# 3.5 FINAL CLEAN-UP

Remove all debris, rubbish and excess material from the Station.

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# IX. DRAWINGS

DEMOLITION DRAWING
SITE PREP DRAWING
LAYOUT DRAWING
WHEEL STOPS — REINFORCED CONCRETE DRAWINGS
HANDICAPPED SINGLE STALL DRAWING
HANDICAPPED DOUBLE STALL DRAWING











